

obsolete), thus destroying the analogy evidently existing between *Papilio* and *Pieris*. As, therefore, (so far as I know), no butterfly has more than 12 nervures, and these nervures are not always analogous when numbered straight on, and since it has been customary to call the costal nervure 12 and the two nervures usually arising from the top of the cell 10 and 11, I have found it necessary to give the supplementary cell at apex of wing another name, and I call it 8a. to prevent confusion. This is all I have to offer as an excuse to those gentlemen whose susceptibilities I may have offended by my vagary. I am very sorry, but at present I cannot even promise not to offend again.

“Rayleigh Villa,” Westcombe Hill, S. E., April 13th, 1894.

NEW SPECIES OF NOTHOCHRYSA.

BY ALEX. D. MACGILLIVRAY, ITHACA, N. Y.

Since 1861, the date of Hagen's Synopsis, only three additional species of Chrysopidæ have been recorded from the United States—one from Florida, one from Texas and one from California. During the past summer I received a short note from Mr. A. P. Morse, of Wellesley, Mass., enclosing a few specimens of Chrysopidæ which he thought might prove new to our collection. When the specimens were studied they were found to belong to the genus *Nothochrysa* and probably new. Upon communicating this fact to him he requested me to describe the species and sent all his material, together with some other miscellaneous Chrysopidæ, among which was found another new species of *Nothochrysa*. The collection also contained specimens of *Chrysopa upsilon*, Fitch, and *Chrysopa chi*, Fitch; the latter was unknown to Dr. Hagen when he wrote his Synopsis, and is apparently rare.

The American species of *Nothochrysa* can be separated by means of the following table:—

- A. Antennæ with the second segment annulated with black.....*annulata*.
- A. A. Antennæ with the second segment not annulated with black.
 - B. Antennæ white, prothorax green, size large.....*phantasma*.
 - B. B. Antennæ and prothorax black, size small*californica*.

Nothochrysa annulata, sp. nov.—Antennæ nearly or quite as long as the wings, basal segment white, immaculate, second segment ringed with black, remaining segments yellowish; head ferruginous, marked with black, as follows; Six dots on the vertex, one at each corner of an imagin-

ary square and one behind each eye, an O-shaped mark surrounding the base of the antennæ, broadest below, interrupted above; a spot between the antennæ, a crescent-shaped mark on the cheeks below the eyes, its anterior horn coalescing with the circle around the antennæ, and the apex of the palpi; the clypeus slightly emarginate; prothorax greenish-yellow, longer than broad, suddenly narrowed in front just before the middle, sides parallel behind the middle, a black dot at each corner and an indistinct transverse band at middle; wings hyaline, slightly annular at apex; pterostigma long, yellowish; the longitudinal veins and the veinlets yellowish white, except the following, which are black: the costal veinlets at base and apex, the radio-subcostal cross-vein near the base of the wing, the base of the veinlets between the first and second branches of radius, the base of the second branch of radius, both series of gradate veins, the base of the veinlets given off from the second branch of radius, the long cross-vein in the anal angle; in the posterior wings, the costal veinlets entirely and base of the veinlets between the first and second branches of radius; twenty-six costal veinlets before the pterostigma, fourteen or fifteen between the radius and its sector, nine in the inner gradate series, and ten in the outer gradate series; legs whitish, tarsi darker; abdomen green, hairy.

Length, 11 mm.; alar expanse, 30 mm.

Habitat—Wellesley, Mass, June.

Nothochrysa phantasma, sp. nov.—Antennæ longer than the wings, white, immaculate, basal segment strongly dilated within; head yellowish-white, immaculate; clypeus emarginate; palpi white; prothorax green, about as broad as long, narrowed in front, sides gradually widened backwards; meso- and metathorax yellowish-white, a purplish dot each side on the suture between the front and lateral lobes of the mesothorax, sometimes wanting; wings narrow, elongate, hyaline; hind wings angular at apex; pterostigma long, white, fuscous at base; the veins and veinlets green or white, except the following, which are black: the second branch of radius, the basal three or four veinlets between the first and second branches of radius, at their base, a spot surrounding the apical cross-vein between media and cubitus, and the gradate veins; in some immature specimens none of the veins are black; the veins and margin hairy; hairs short, white; twenty-six to twenty-nine costal veinlets before the pterostigma, sixteen to seventeen between the radius and its sector, eight to ten in the inner gradate series, seven to nine in the outer gradate series;

legs white, tarsi darker ; abdomen green with a median dorsal yellow line ; fifth dorsal segment with a large brownish spot.

Length, 13 mm. ; alar expanse, 46 mm.

Habitat—West Chop, Massachusetts, July to August.

The following notes on the habits of this species are of interest :—
“ This beautiful little insect first attracted my attention while strolling at twilight along the silent leaf-strewn wood-roads of the Vineyard, in the immediate vicinity of West Chop. I first noticed it early in July, and it is still common in mid-August.

“ It seems specially fond of oak trees and is nocturnal in habits, being rarely seen by day. When startled from its resting-place by daylight it flutters rapidly and erratically to a neighboring branch or downward to the sheltering undergrowth of huckleberry bushes, which everywhere fill the woods. Shortly after sundown, however, it awakens to activity, and may then be observed as a dimly perceptible paleness drifting silently and steadily through the twilight gloom.

“ When taken in the hand, this impalpable apparition resolves itself into a ghostly little elf clad in pale-green and white, with brilliant purple eyes and gauzy wings ; a veritable dryad of the woods.”

Nothochrysa californica, Banks.—Antennæ shorter than the wings, wholly black ; head reddish-yellow, antennal sockets surrounded with black, three black streaks above, connected with the black of antennal sockets, and a few blackish lines below antennæ ; palpi black ; prothorax black, with a median light stripe, broader at each end, and the extreme margin light, narrowed in front, sides gradually sloping ; meso- and meta-thorax black ; wings hyaline, round at apex ; veins mostly black ; costa and base of radius on fore-wing, costa and almost whole of radius on hind-wings, yellowish ; pterostigma brown, throughout its entire length ; sixteen or seventeen costal veinlets before the pterostigma, ten or eleven between the radius and its sector, ten in the inner gradate series, twelve in the outer gradate series ; less testaceous, middle and hind femora darker, tips of tibiæ and joints of tarsi black ; abdomen short, black, the posterior margin of the segments on sides narrowly yellowish.

Length, 9 mm. ; alar expanse, 26 mm.

Habitat—California.

I am indebted to Mr. Nathan Banks, Sea Cliff, N. Y., for notes on this species.